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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,839	02/27/2004	David J. Neivandt	1-24197	6906

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EXAMINER

ZEMEL, IRINA SOPJIA

ART UNIT PAPER NUMBER

1711

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

<b>Application No.</b> 10/788,839	<b>Applicant(s)</b> NEIVANDT ET AL.
<b>Examiner</b> Irina S. Zemel	<b>Art Unit</b> 1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 12 April 2004.
- 2a)  This action is **FINAL**.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-67 is/are pending in the application.  
4a) Of the above claim(s) 28-67 is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-27 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) 1-67 are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All   b)  Some \*   c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12-4-2004.
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-27, drawn to starch compositions and furnish comprising starch compositions, classified in class 525, subclass 54.21.
- II. Claims 28-67, drawn to methods of making starch compositions and products obtained by the claimed methods, classified in class 524, subclass 47.

The inventions are distinct, each from the other because of the following reasons:

Inventions group I and Group II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by a materially different process such as blending process without cooking starch component at claimed pH or raising pH thereafter.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Gary Sutter on July 21, 2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-27. Affirmation of this election must be made by applicant in replying to this Office action. Claims 28-67 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 19-23 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5643,603 to Bottenberg et al (hereinafter "Bottenberg").

Bottenberg discloses starch compositions comprising starch and a polymer containing anionic groups, i.e., polyacrylic acid (containing carboxylic groups). See

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table in column 4 lines 49-53. The starch used in the disclosed compositions is a pregelatinized, or necessarily cooked starch. The compositions are formulated in tablets, i.e. dry formulations. The intended use limitation of claim 19 that compositions are "suitable for forming an additive for a paper furnish" is only given weight to the extent that the composition disclosed in the reference is capable of being used as an additive for a paper furnish. The disclosed composition is capable for the claimed use because compositions comprising gelatinized starches are well known for such uses. Therefore, the limitation of claim 19 is anticipated by the reference. The burden is shifted to the applicant to provide convincing factual evidence to the contrary.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,512,618 to Duerr (hereinafter "Duerr").

Duerr discloses starch compositions comprising starch and a polymer containing anionic groups, i.e., polymer base on acrylic acid monomers (containing carboxylic groups). See table in column 3 lines 35-66. The starch used in the disclosed compositions is a pregelatinized, or necessarily cooked starch. Therefore, the invention as claimed is fully anticipated by Durrer.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4,424,291 to Leake et al (hereinafter "Leake").

Leake discloses starch compositions comprising pre-cooked gelatinized starch and a polymer containing anionic groups, i.e., polymer base on acrylic acid monomers (containing carboxylic groups). See table I in columns 9-10. Therefore, the invention as claimed is fully anticipated by Leake.

Claims 1-5, 7-9, 19-23 and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,061,346 to Taggart et al (hereinafter "Taggart").

Taggart discloses starch compositions comprising pre-gelatinized or gelatinized (cooked) starch and a polymer containing anionic groups, carboxymethylcellulose (CMC) – see all illustrative examples. The reference further discloses addition of a papermaker's alum (sodium aluminate) to the composition containing cooked starch and CMC. See, for example, column 5, lines 4-5. The reference discloses paper furnishes comprising compositions containing cooked starch and CMC – also see all illustrative examples. The reference further discloses dry blended compositions containing starch and CMC. See column 10, lines 7-10. The reference further discloses furnishes containing dissolved dry starch/CMC compositions. See column 15, lines 10-53. The invention as claimed, therefore, is fully anticipated by the teachings of the Taggart reference.

***Claim Rejections - 35 USC § 102/103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bottenberg.

The disclosure of the Bottenberg reference is discussed above. The difference between the claimed compositions and the compositions disclosed by Bottenberg is that the claimed product is obtained by a process in which the starch and the polymer is first mixed and then the resulting mixture is then cooked, while the reference discloses first cooking the starch and then mixing it with the polymer. The process limitations recited in claim 10 are only given weight to the extent that the product obtained by the claimed process is necessarily different from the product disclosed in the reference. It is believed, however, that the product disclosed in the reference does not differ from the claimed product because upon cooking only the starch components would gelatinized regardless of presence of additional components. The burden is shifted to applicants to provide factual evidence to the contrary.

In the alternative, it would have been obvious to change the order of steps is a process disclosed in the reference with reasonable expectation of adequate results. See *Ex parte Robins*, 128 USPQ440. Therefore the invention as claimed in unpatentable over Bottenberg.

Claims 10-14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Duerr.

The disclosure of the Duerr reference is discussed above. The difference between the claimed compositions and the compositions disclosed by Duerr is that the claimed product is obtained by a process in which the starch and the polymer is first mixed and then the resulting mixture is then cooked, while the reference discloses first cooking the starch and then mixing it with the polymer. The process limitations recited

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in claim 10 are only given weight to the extent that the product obtained by the claimed process is necessarily different from the product disclosed in the reference. It is believed, however, that the product disclosed in the reference does not differ from the claimed product because upon cooking only the starch components would gelatinized regardless of presence of additional components. The burden is shifted to applicants to provide factual evidence to the contrary.

In the alternative, it would have been obvious to change the order of steps is a process disclosed in the reference with reasonable expectation of adequate results. See *Ex parte Robins*, 128 USPQ440. Therefore the invention as claimed in unpatentable over Duerr.

Claims 10-14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Leake.

The disclosure of the Leake reference is discussed above. The difference between the claimed compositions and the compositions disclosed by Leake is that the claimed product is obtained by a process in which the starch and the polymer is first mixed and then the resulting mixture is then cooked, while the reference discloses first cooking the starch and then mixing it with the polymer. The process limitations recited in claim 10 are only given weight to the extent that the product obtained by the claimed process is necessarily different from the product disclosed in the reference. It is believed, however, that the product disclosed in the reference does not differ from the claimed product because upon cooking only the starch components would gelatinized



regardless of presence of additional components. The burden is shifted to applicants to provide factual evidence to the contrary.

In the alternative, it would have been obvious to change the order of steps is a process disclosed in the reference with reasonable expectation of adequate results. See *Ex parte Robins*, 128 USPQ440. Therefore the invention as claimed in unpatentable over Leake.

Claims 6, 10-28, and 24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Taggart.

The disclosure of the Taggart reference is discussed above. Claims 6, 15 and 24 are, de facto, product-by-process claims claiming steps of adding aluminum compound prior to cooking starch. The process limitations recited in claim 6, 16, and 24 are only given weight to the extent that the product obtained by the claimed process is necessarily different from the product disclosed in the reference. It is believed, however, that the product disclosed in the reference does not differ from the claimed product because upon cooking of the starch, aluminum compounds are not expected to react with starch. The burden is shifted to applicants to provide factual evidence to the contrary.

As far as claims 10-18, again, those claims, as discussed above are product-by-process claims. The difference between the claimed compositions and the compositions disclosed by Taggart is that the claimed product is obtained by a process in which the starch and the polymer is first mixed and then the resulting mixture is then cooked, while the reference discloses first cooking the starch and then mixing it with the

polymer. The process limitations recited in the base claim 10 are only given weight to the extent that the product obtained by the claimed process is necessarily different from the product disclosed in the reference. It is believed, however, that the product disclosed in the reference does not differ from the claimed product because upon cooking only the starch components would gelatinized regardless of presence of additional components. The burden is shifted to applicants to provide factual evidence to the contrary.

In the alternative, it would have been obvious to change the order of steps is a process disclosed in the reference with reasonable expectation of adequate results. See *Ex parte Robins*, 128 USPQ440. Therefore the invention as claimed in unpatentable over Taggart.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Johansson, US Patent 5,606,053.

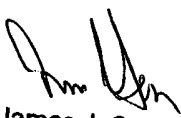
Johansson teaches that addition of aluminum compounds to starch compositions, either prior or after cooking the starch, results in improved retention and/or dewatering in a pulp or papermaking process.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ISZ



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